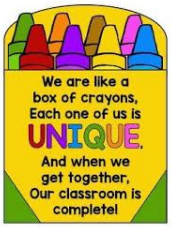
Baslow St. Anne's C of E Primary School

Life in all its fullness .. growing healthy minds and hearts together

Kindness - Respect - Diversity



Computing in Early Years Foundation Stage at Baslow St Anne's CofE Primary School

The Early Years Foundation Stage Curriculum allows for flexible planning to respond to current events in the setting as well as the interests of the children.
The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than being subject specific.
The EYFS Statutory Framework says for Expressive Arts and Design:

'The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.'

The EYFS Statutory Framework says for Personal, Social and Emotional Development:

'Children's personal, social and emotional development (PSED) is crucial for children to lead healthy and happy lives and is fundamental to their cognitive development. Underpinning their personal development are the important attachments that shape their social world. Strong, warm and supportive relationships with adults enable children to learn how to understand their own feelings and those of others. Children should be supported to manage emotions, develop a positive sense of self, set themselves simple goals, have confidence in their own abilities, to persist and wait for what they want and direct attention as necessary. Through adult modelling and guidance, they will learn how to look after their bodies, including healthy eating, and manage personal needs independently. Through supported interaction with other children, they learn how to make good friendships, co-operate and resolve conflicts peaceably. These attributes will provide a secure platform from which children can achieve at school and in later life.'

This document outlines which statements from the Birth to 5 matters age ranges three to four year olds and Reception and the Early Learning Goals in the EYFS statutory framework are prerequisite skills for Computing within the national curriculum.

The most relevant statements for Computing are taken from the following area of learning:

- Understanding the World
- Physical Development
- Expressive Arts and Design
- * Personal, Social and Emotional Development
- * Mathematics

Age Range	
3 – 4 Year olds	**Personal, Social and Emotional Development** Remember rules without needing an adult to remind them. **Physical Development** Match their developing physical skills to tasks and activities in the setting. **Mathematics**

	Solve real world mathematical problems with numbers up to 5. Discuss routes and locations, using words like 'in front of' and 'behind'. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then. **Understanding the World** Explore how things work.
Reception (4 – 5 year olds)	**Personal, Social and Emotional Development** Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing:-sensible amounts of 'screen time'. **Physical Development** Develop their small motor skills so that they can use a range of tools competently, safely and confidently. **Mathematics** Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. Select, rotate and manipulate shapes to develop spatial reasoning skills. Continue, copy and create repeating patterns **Understanding the World** Explore, use and refine a variety of artistic effects to express their ideas and feelings.
End of Reception Early Learning Goals (ELG)	**Personal, Social and Emotional Development :- Managing Self** Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly. **Expressive Arts and Design – Creating with materials** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Key vocabulary used for the teaching and learning of computing in the Early Years:-

Computer science	Information Technology	Digital Literacy
On off switch backwards forward instruction sound moving	Buttons collect command computer count equipment keyboard keys monitor mouse movement organise Phone camera remote set of photos type	Choices create internet information share technology website

Our approach to computing in Early Years

In Reception at Baslow we lay the foundations on which future learning is built. Our aim is for children to be digitally literate: the ability to be able to express themselves and communicate ideas using tools and technology and participate fully in the modern digital world and laying the foundations of computational thinking.

We recognise that many children have devices at home. We use iPads with precision - teaching specific skills, for research or educational apps which enhance other areas of learning. Internet safety is paramount and we understand we have a duty to keep children safe and teach them how they can keep themselves safe online – we take part in Internet Safety day/week, as part of computing lesson and through stories, it is also incorporated into Anti-Bullying Week. We support and educate parents as needed. The children learn how to keep equipment safe. How to use properly, store, clean, charge and handle equipment.

At Baslow we help children to be curious about technology in real world contexts: what happens inside a microwave? or a photocopier? What happens when Daddy puts his card in the machine outside the bank? What is the machine called? Why does he have to type a number in? Why does he keep it secret? Through role play and natural discussions like these the children make sense of their world. We ensure that we have play phones and

laptops in role play areas to support children's developing understanding of computing. We also provide books with buttons, flaps and time to tinker with technological toys where children can explore cause and effect. By providing open ended activities within our highly engaging and effective learning environment we encourage children to use all their senses to observe, discover and engage with the world, we encourage them to tinker, play and explore.

Opportunities to take things apart, to build and make models help children to be creative. Getting children to do a jigsaw, recreate a pattern or draw a picture can all encourage them to debug. We provide activities that require longer periods of engagement, concentration and perseverance. Sharing books and toys, playing with puppets or taking part in a nativity play or harvest festival all help develop collaboration.

As part of our learning we explore the technology used in our school by going on a 'technology walk' – photocopier, laminator, phone, microwave etc. When we go into our community we find out about technology outside – traffic lights, crossings, cashpoint etc.

This leads into discussions with children about how things work – equipping children with an understanding about how computers and computer systems work so that they develop transferrable skills which will enable them to design, develop or even just adapt to new tools and technologies in the future.

In EYFS we lay the foundations for future development of children's computational thinking. Our approach is deep rooted in our characteristics of learning **Playing and exploring** links closely with tinkering and collaborating, as well as abstraction. **Active learning** is tied to debugging and persevering. **Creating and thinking critically** connects with 'creating', as well as back to the concepts of logical reasoning and algorithms.

Computational Thinking is about transforming a seemingly complex problem into a simple one that we know how to solve. It involves taking a problem and breaking it down into a series of smaller, more manageable parts (**decomposition**). Each part can then be looked at individually, considering similarities between and within other problems (**pattern recognition**), and focusing only on the important details whilst ignoring irrelevant information (**abstraction**). Next, looking for solutions to other problems and adapting them to solve new problems **(generalisation)**. Then, simple steps or rules to solve each of the smaller problems can be designed (**algorithms**). Once we have a working solution, we then use **(evaluation)** to analyse it and ask – *Is it any good* ? *Can it be improved? How?* We encourage computational thinking by encouraging children to self-evaluate through questioning, peer assessment and plan do review.

We explore using photography, record music that they make, video one another and paint with fingers or a mouse.

<u>What computing looks like in Early Years</u>

To know how to operate simple equipment.
To show an interest in technological toys with knobs or pulleys, or real objects.
To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images
To know that information can be retrieved from computers.
To complete a simple program.
To interact with age-appropriate computer software.
To recognise that a range of technology is used in places such as homes and schools. To select and use technology for particular purposes.
Simple ICT Equipment available in EYFS – remote control cars, iPads, BeeBots, laptop, whiteboard, torches, interactive books, Yoto's.
Tools used and skills taught on iPads – take and edit photos, use educational apps, use google search for information
Computer software and websites – Fizzy's Maths, ICT games, Topmarks, Phonics Play, Cbeebies etc.

Computational Thinking and Coding	Create and Communicate	Online Safety
Computer Science	Information Technology	Digital Literacy
Sequence forwards and turns e.g. with Beebot **Predict** the outcome of a set of instructions and test the results. Use symbols to represent an instruction, through unplugged coding e.g. ⬆➡for forward and turn. Know how to clear the code. **Decomposition** by breaking the code down into chunks (1 step at a time) Know that pressing GO will make the robot move	**Typing and mouse skills** Type own name Enter single letters on a keyboard Use a mouse/track pad on a computer **Saving and retrieving** Recognise save icon Use new page icon Make choices from a range of software/app **Research** Use map software to look at satellite and street view images of a place as a class/group **Images (Photography and drawing)** Take a photograph using a tablet and using in an app Take a photograph on a iPad, print it to cut/stick for a purpose Take portraits and landscapes Use a painting program to explore paint tools and brushes Use mark up tools to draw on photographs **Sound Engineering** Record sounds/voices in story telling/ explanations Know red circle means record Know square means stop Know triangle/green means play **Data** Use pictograms/ charts as part of lessons with the children	**Systems** Understand what an electronic device is and find them around school. Know how to use iPads, sound recording, video recording Open and close software **Privacy & Security** Know that the internet has exciting places to go but there are rules to follow to be safe. What is personal information: Name Age Town/Village School Know who a trusted person is. **Online Bullying** Describe ways that people can be unkind with devices: -not sharing them -taking photographs **Relationships & Well-Being** Handle resources appropriately and use technology safely around the classroom. Know that adults at home set rules for using devices and that the use of devices at home may be different to at school: -Watching TV vs Making a Film -Playing a game vs Painting a picture **Creative Credit, Copyright and Quality** Putting their name on digital work – write it/type it? Using a selfie

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